

Appl. No. : 10/657,416
Filed : September 8, 2003

REMARKS

Claim 1 has been amended to further limit the invention. Claims 2, 3, 4, 6, 10, 11, and 12 have been written in independent form including all of the limitations of a base claim and any intervening claims. Claims 8 and 9 have been amended to depend from Claim 3. Claims 13-21 have been canceled as being directed to a non-elected invention. No new matter has been added. Applicant respectfully requests entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Rejection Under 35 U.S.C. § 102

Claims 1, 8, and 9 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Jang. Claims 8 and 9 have been amended to depend from Claim 3 which has not rejected on this ground. Thus, the rejection of Claims 8 and 9 should be withdrawn. Claim 1 has been amended to further limit the invention, and Applicant respectfully traverses the rejection.

The Examiner asserts:

“In regards to Claims 1 and 9, Jang et al. teaches (Figure 1-3, columns 9, 10, lines 20-65) a method ... comprising the steps of: forming a first insulation film (26) on a substrate by plasma CVD using a first source gas ..., and continuously forming a second insulation (28) film on the first insulation film ...in situ by plasma CVD using a second source gas ..” (Emphasis added.)

However, Jang states:

“the first gap filling dielectric layer [26] may be formed from any of several gap filling dielectric materials as are known in the art of integrated circuit fabrication, including but not limited to spin-on-glass (SOG) gap filling dielectric materials, atmospheric pressure chemical vapor deposited (APCVD) gap filling dielectric materials and sub-atmospheric pressure chemical vapor deposited (SACVD) gap filling dielectric materials.” (col. 9, lines 38-46) (Emphasis added.)

“the second conformal inter-metal dielectric (IMD) layer 28 is preferably formed through a second plasma enhanced chemical vapor deposition (PECVD) method otherwise equivalent to the first plasma enhanced chemical vapor deposition method.” (col. 10, lines 11-16) (Emphasis added.)

Thus, clearly, in Jang, the first dielectric layer 26 and the second dielectric layer 28 are formed by different methods, and the first dielectric layer 26 is not suggested to be formed by PECVD as compared with the second dielectric layer 28 which is formed by PECVD. The

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Examiner's understanding that the first dielectric layer 26 is formed by plasma CVD has no basis. According to Jang's above statement, one of ordinary skill in the art could not reach the interpretation that the first dielectric layer 26 would be formed by PECVD.

Further, Claim 1 has been amended to specifically limit that the first and second insulation films are formed in the same reactor (Applicant does not intend to apply this limitation to the remaining claims). Jang does not teach or even suggest that the first dielectric layer 26 and the second dielectric layer 28 be formed in the same reactor. On the contrary, Jang teaches using the different methods for the first and second dielectric layers 26 and 28; i.e., the layers cannot be formed in the same reactor.

In view of the foregoing, Jang could not anticipate Claim 1, and Applicant respectfully requests withdrawal of this rejection.

Allowable Subject Matter

Claims 2-7 and 10-12 have been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 2, 3, 4, 6, 10, 11, and 12 have been so rewritten, and the remaining claims depend from either one of the above claims. Thus, Claims 2-7 and 10-12 should be allowed.

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CONCLUSION

In light of the Applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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